

This Page Is Inserted by IFW Operations  
and is not a part of the Official Record

## **BEST AVAILABLE IMAGES**

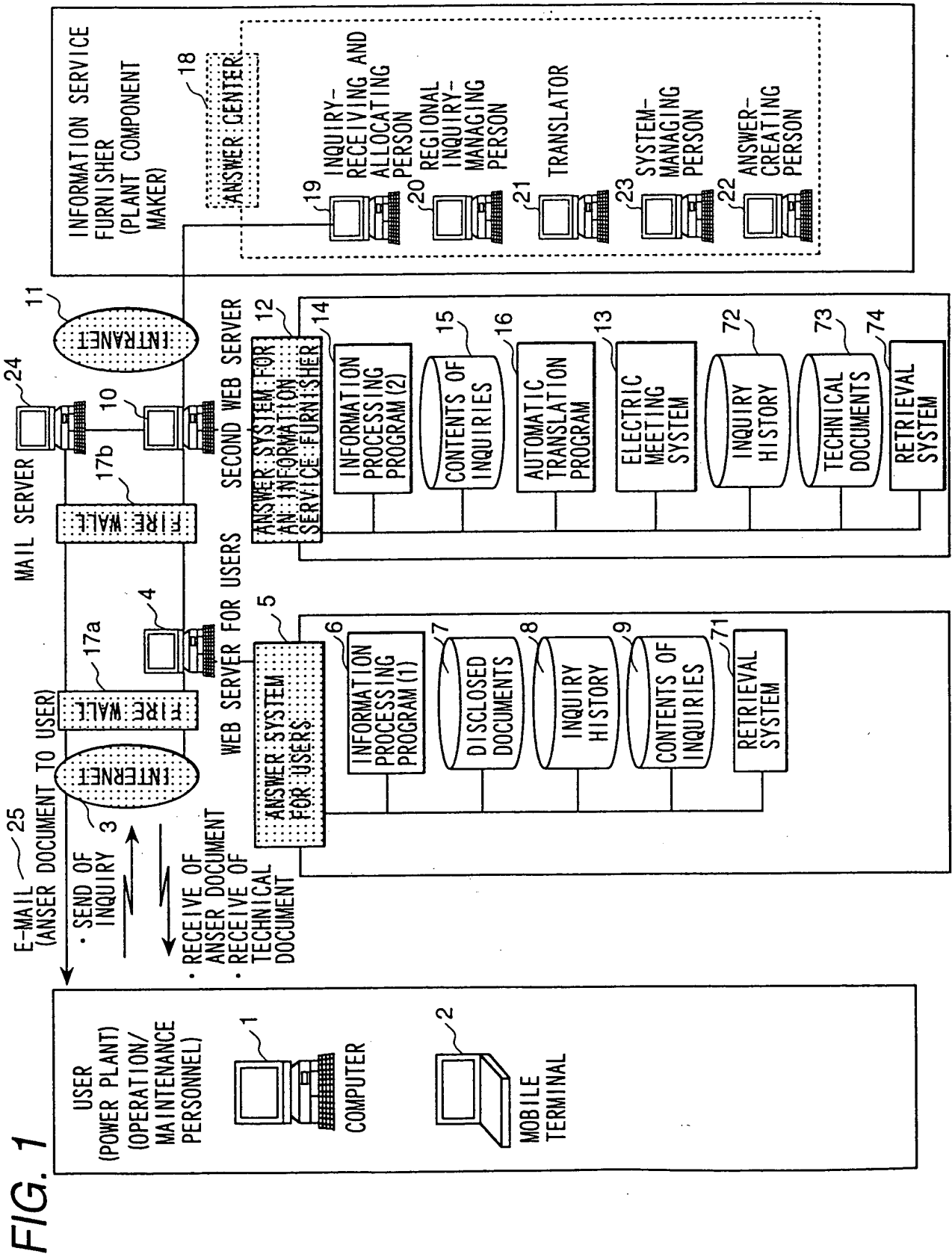
Defective images within this document are accurate representations of the original documents submitted by the applicant.

Defects in the images may include (but are not limited to):

- BLACK BORDERS
- TEXT CUT OFF AT TOP, BOTTOM OR SIDES
- FADED TEXT
- ILLEGIBLE TEXT
- SKEWED/SLANTED IMAGES
- COLORED PHOTOS
- BLACK OR VERY BLACK AND WHITE DARK PHOTOS
- GRAY SCALE DOCUMENTS

**IMAGES ARE BEST AVAILABLE COPY.**

**As rescanning documents *will not* correct images,  
please do not report the images to the  
Image Problem Mailbox.**



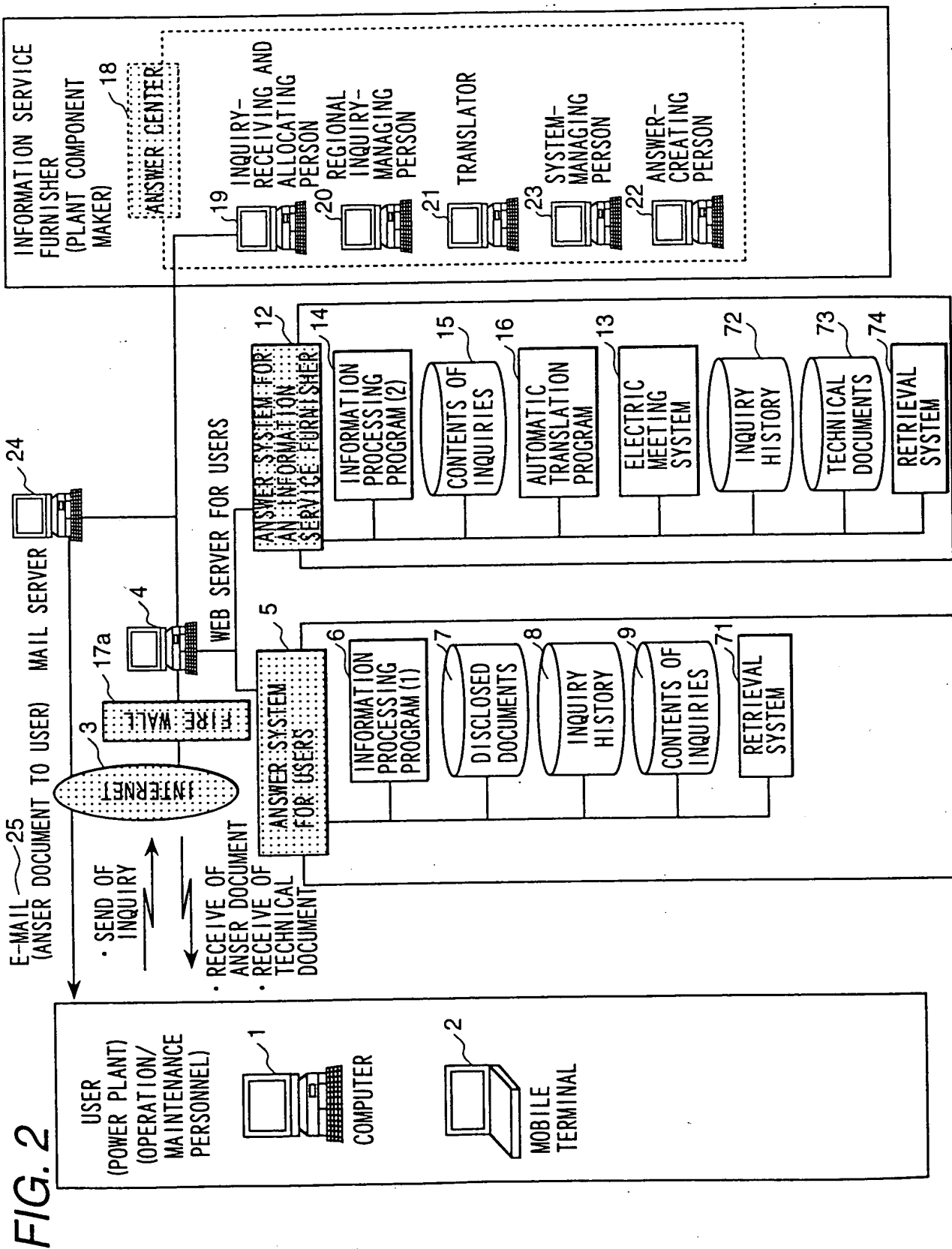


FIG. 3

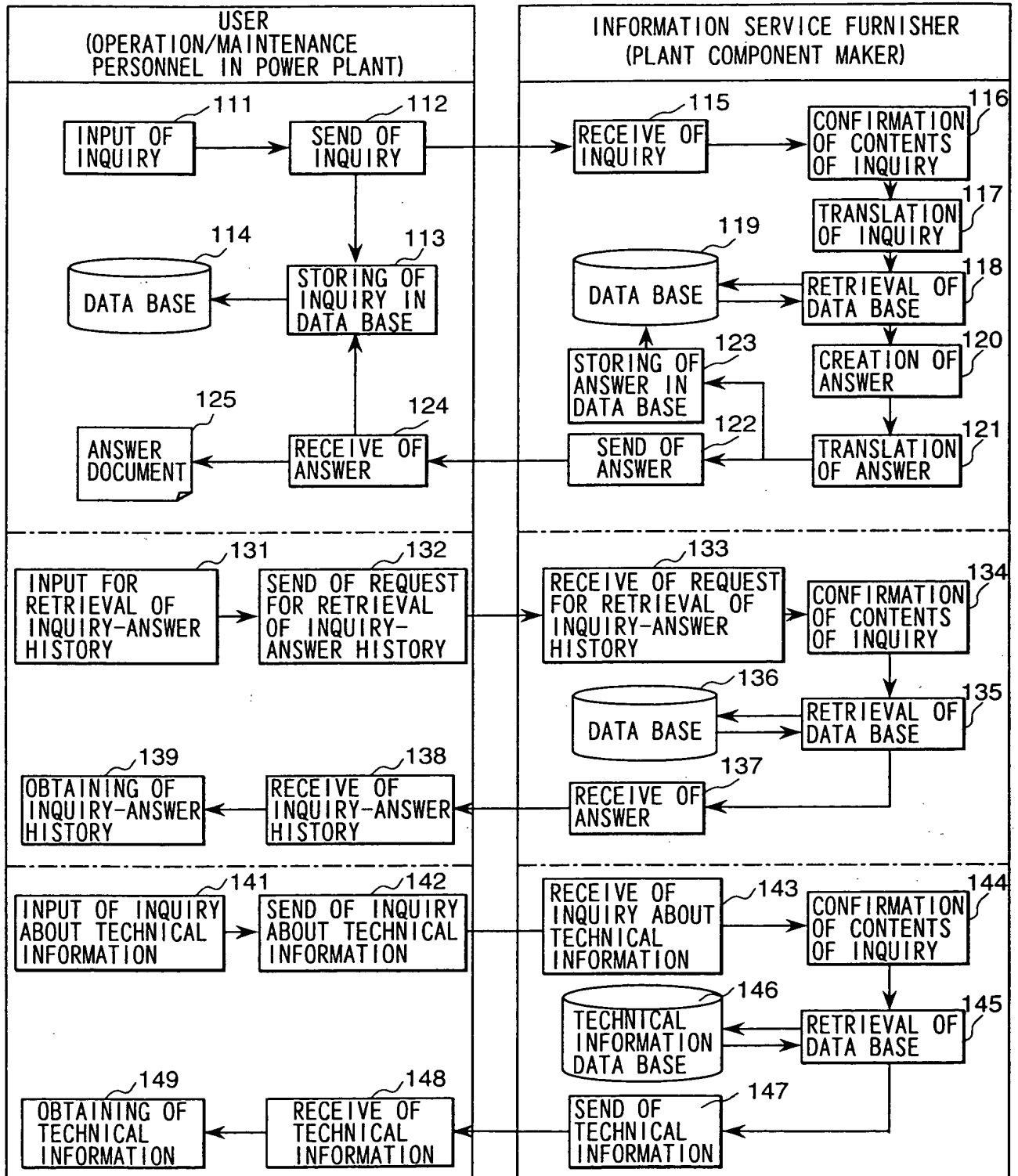


FIG. 4

質問内容詳細			
質問番号	HCL-0012	受付日	2000/02/03
回答要求日	明月中	状況	顧客回答済
機器名	Steam Turbines	関連質問番号	
件名	SCV Sticking Problem	電子会議室	
関連質問資料			
質問(英文)	<p>EPC has asked if HTC recommends installing grease fittings for application of high temperature grease to SCV camshaft bushings (oilless bushings). XED4 will have brief maintenance outage this coming weekend and if we make such recommendation then EPC would like some details so that they can perform such work on this weekend. I have given a preliminary verbal reply that we will likely advise against using grease in the oilless bushings but that we will consult with T-Pukei. Please send your comments to me through TSA Answer Center and also by fax or e-mail If possible please send reply this evening as I will business trip to Edmonton tomorrow.</p> <p>Best regards, JJActon</p>		
質問(和文)	<p>EPCから、高温用greaseをSCVカムシャフト・ブッシング(オイルレス・ブッシング)に注入するための取り付け口をHTCが推奨するかとの問い合わせを受けました。この週末にXED4は点検補修のために短期停止をします。もしHTCが推奨するというなら、今週末に取り付けを行なえるように、その要領を要求しています。</p> <p>私は以前、グリースをオイルレス・ブッシングに使うことにはあまり賛成できないが、T-Pukeiに相談してみますと口頭で返答しました。TSAアンサーセンターからそちらのコメントを送ってください。ファックスまたは電子メールへも同様に返答ください。明日エドモントンに出張に行くため、できたら今晚にも返事ください。</p> <p>JJActon</p>		
回答(英文)	<p>We would like to reply as below.</p> <p>1)The camshaft bushing is oil-less bushing No.500.Basically grease is not used for this bushing type.</p> <p>HTC does not have such an experience as what EPC intends to do .</p> <p>2)Our recommendation is that to conduct hot check immediately after stopping the turbine.</p> <p>The hot check means to conducted to confirm that SCV and servo-motor can move smoothly to both open and close directions.</p> <p>Please pay a special attention when the servo-motor stroke is around 120mm.</p> <p>Best Regards, TGS/ Hotta</p>		
備考			

FIG. 5(a)

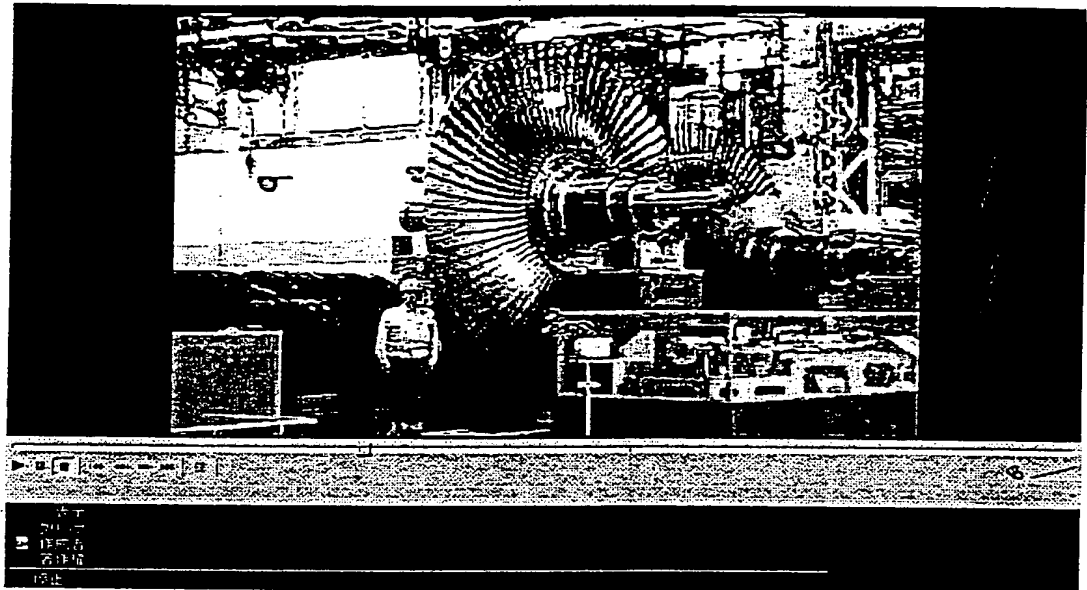


FIG. 5(b)

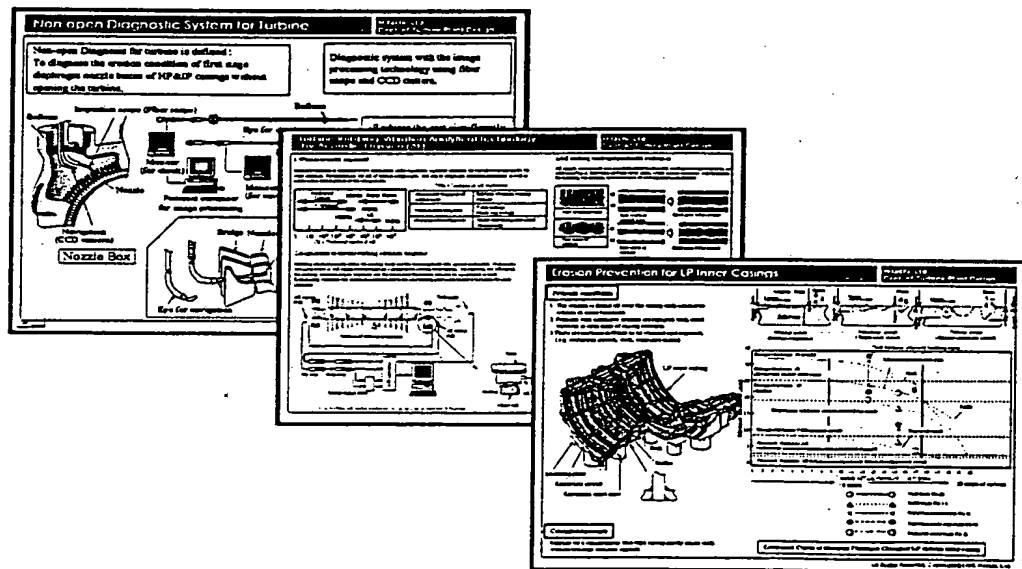
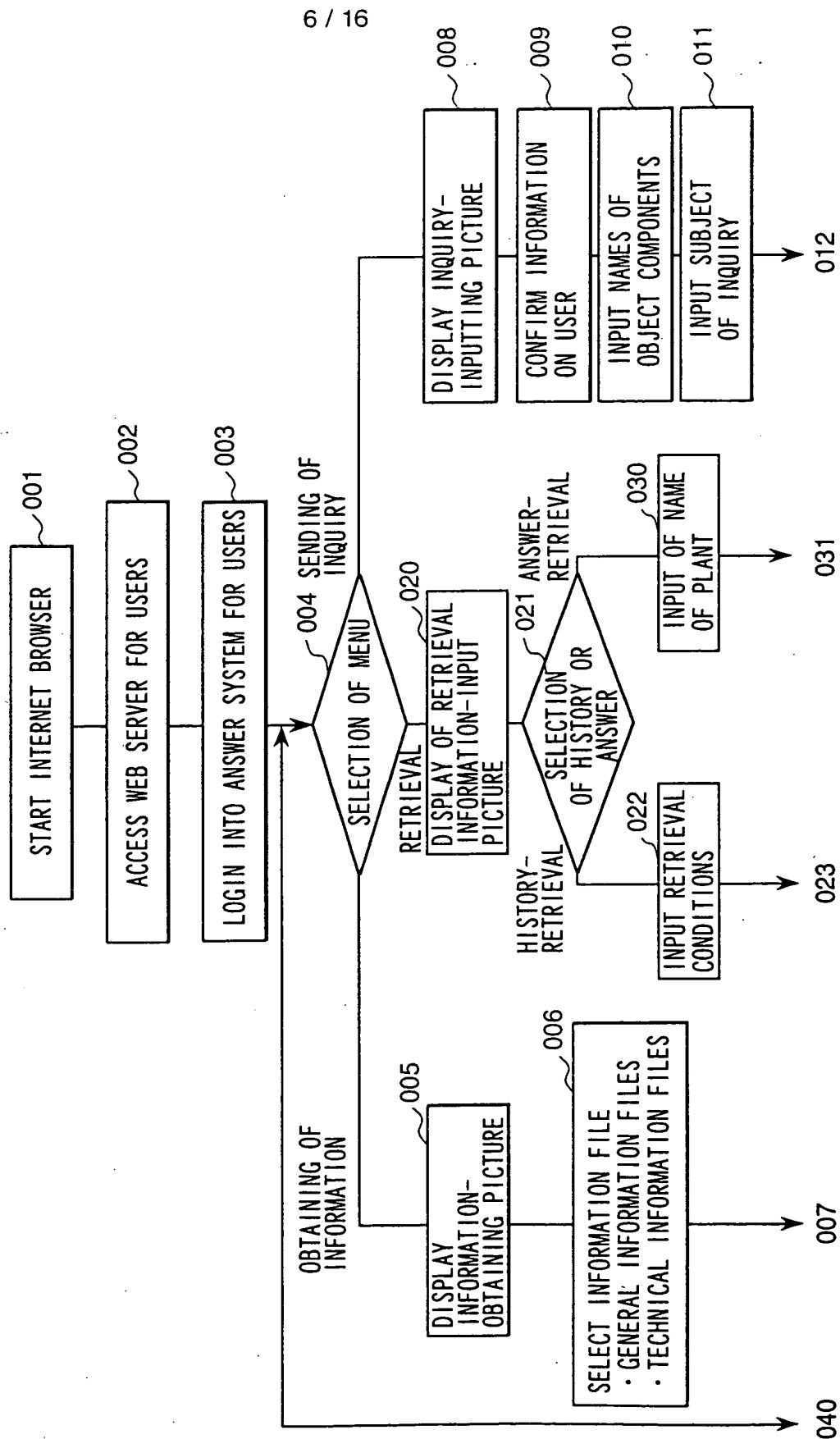


FIG. 6-1



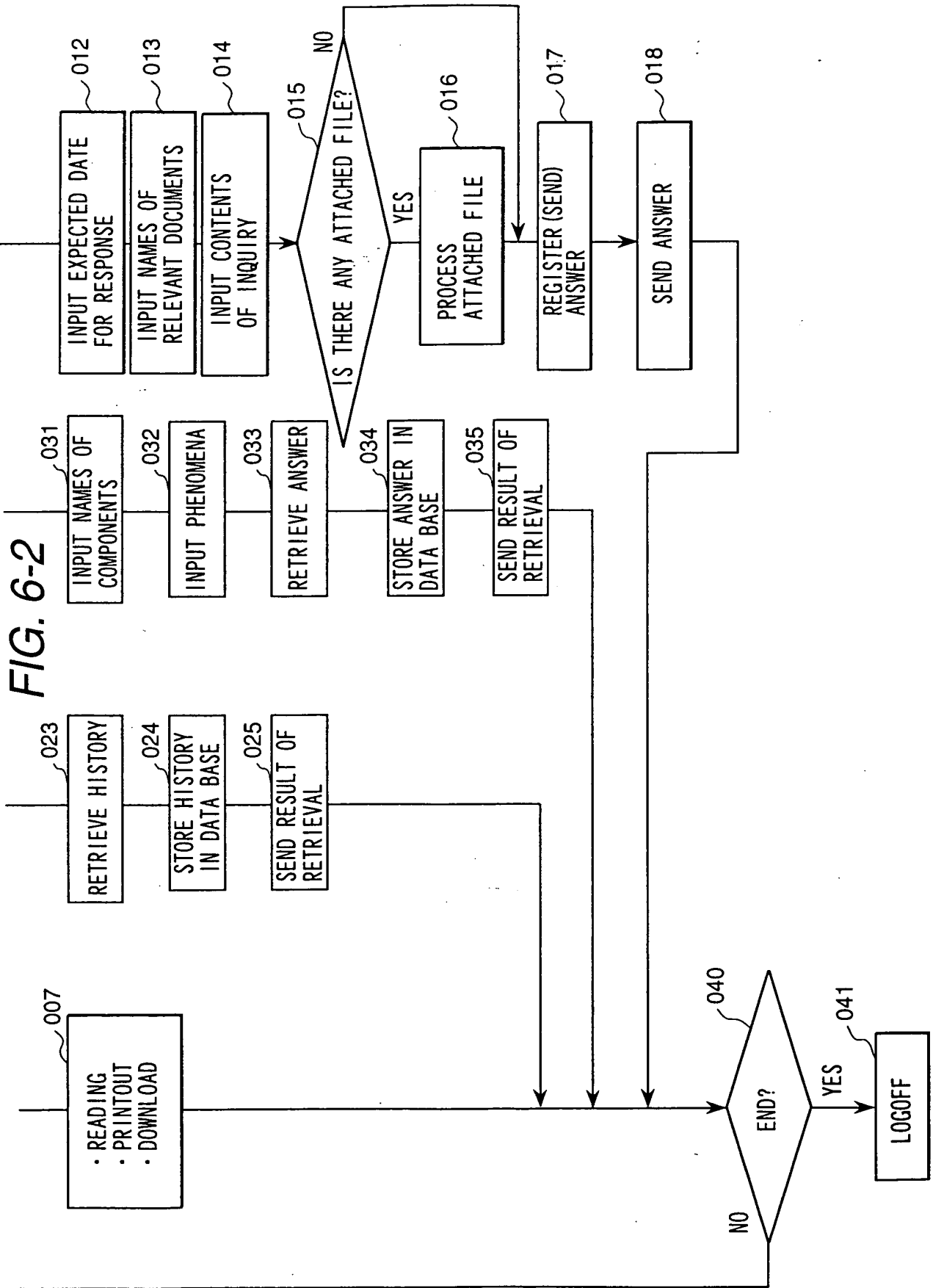




FIG. 7-1

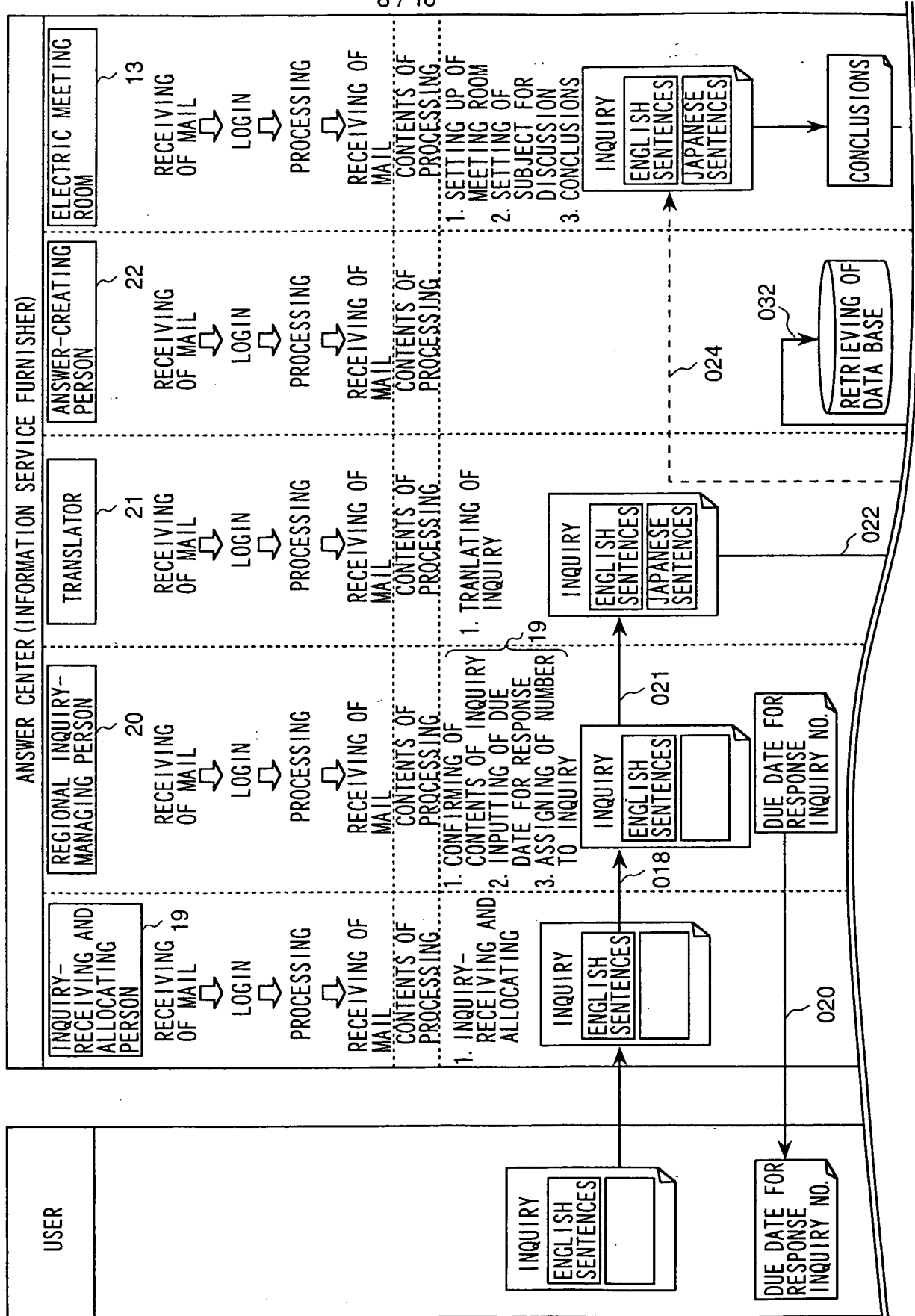


FIG. 7-2

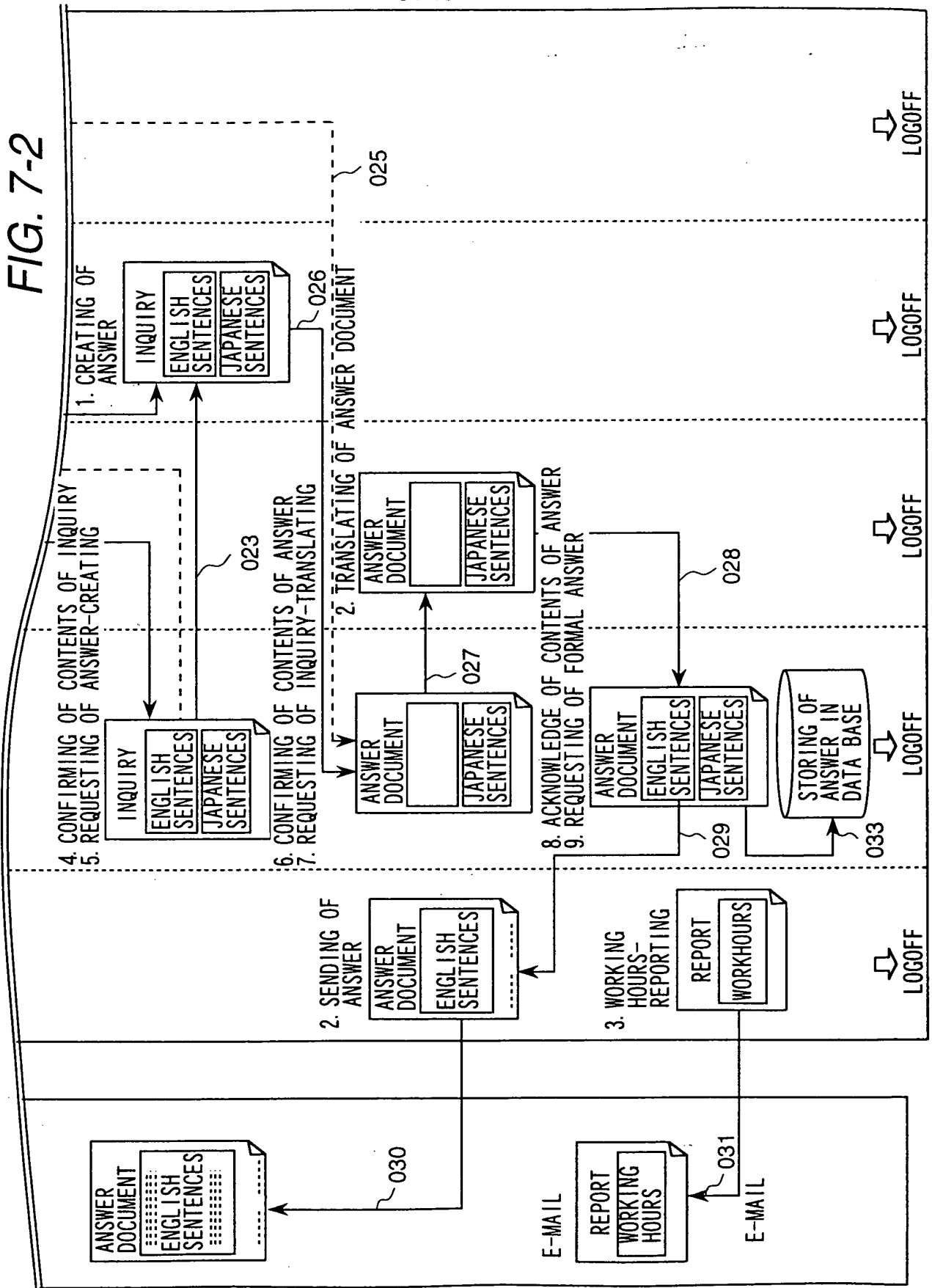


FIG. 8

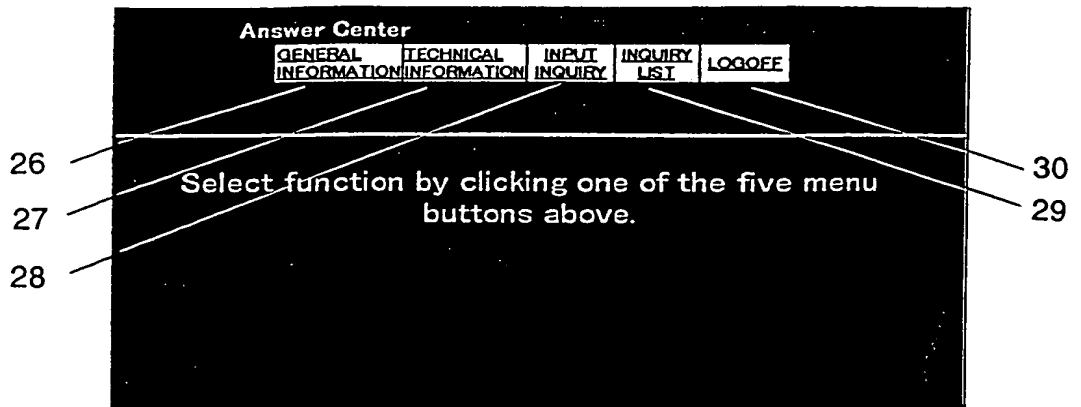


FIG. 9

**Answer Center**

GENERAL INFORMATION TECHNICAL INFORMATION INPUT INQUIRY INQUIRY LIST LOGOFF

**General Information**

Please Select Category For Further Information.

Answer Center  
CALENDER  
Global Service  
INFORMATION  
INSTRUCTION

**General Information(Category:INFORMATION)**

FileName	Update Day	File Size	File Type
Turbine.PPT	2000/01/08	149.5(KB)	PPT File

FIG. 10

**Answer Center**

GENERAL INFORMATION TECHNICAL INFORMATION INPUT INQUIRY INQUIRY LIST LOGOFF

**INQUIRY REQUEST FORM**

Company:		TEL:	
Power Station:		Name:	
Address:		FAX:	
Division:		E-Mail:	

Notes: If you change functions by clicking one of the five menu buttons above before send

Equipment:  Priority:

Subject:  Reference Inquiry No.:

Reference Document No.:

FIG. 11

Answer Center

GENERAL INFORMATION TECHNICAL INFORMATION INPUT INQUIRY INQUIRY LIST LOGOFF

Reference Document No.:

Detail of Inquiry:

Send Inquiry to

Attach the reference documents

If you will send the reference documents or data sheets together with your inquiry, please click button at right.

FIG. 12

Answer Center

GENERAL INFORMATION TECHNICAL INFORMATION INPUT INQUIRY INQUIRY LIST LOGOFF

INQUIRY LIST

Inquiry No.	Subject	Name of Inquirer	Issued Date	Requested Replying Date	Received Date	Planned Replying Date	Replied Date
HAW-0001	test inquiry 2000.1.7	testname	2000/01/07	Within Next Day	2000/01/07	2000/01/08	
HAW-0002	test2000.1.7	testname	2000/01/07	Within Next Day	2000/01/07	2000/01/10	
HAW-0003	vacuum	testname	2000/01/07	Within A Month	2000/01/08	2000/01/15	
HAW-0005	test	testname	2000/01/08	Others			
HAW-0009	test	testname	2000/01/12	Within Next Day	2000/01/14	2000/01/17	
HAW-0010	azapha	testname	2000/01/12	Within Next Day	2000/01/13	2000/01/23	
HAW-0011	surbine	testname	2000/01/13	Within Next Day	2000/01/14	2000/01/18	
HAW-0012	test	testname	2000/01/13	Within Three Days			
HAW-0013	test	testname	2000/01/13	Others	2000/01/13	2000/01/22	2000/01/13
HAW-0014	test	testname	2000/01/13	Within A Week			
HAW-0015	test01	testname	2000/01/13	Within Next Day			
HAW-0016	test	testname	2000/01/13	Within Three Days	2000/01/14	2000/01/17	

FIG. 13

Answer Center

検索 技術資料 図面 英文 質問 回答 システム 電子会議 LOGOFF

T.S.A. Answer Center

UserID: 41

Password: 42

LOGIN

パスワード変更

**FIG. 15**

FIG. 16[illegible]



54

FIG. 21

59

60

68

FIG. 22

61





FIG. 26

81 RETRIEVAL CONDITIONS		80 82 PHENOMENON		83 85 CAUSE		84 86 RESULT OF RETRIEVAL (EXAMPLE OF ANSWER)	
NAME OF COMPONENT	PORTION OF COMPONENT	PHENOMENON		CAUSE		COUNTERMEASURE	
GAS TURBINE	COMBUSTOR	CRACKING AT MAIN COMBUSTION CHAMBER		LARGE THERMAL STRESS		ADHIBIT REPAIR BY WELDING	
GAS TURBINE	BEARING	LARGE VIBRATION		UNBALANCE		ATTACH A BALANCE WEIGHT	
GAS TURBINE	BEARING	LARGE VIBRATION		DEVIATION IN ALIGNMENT		ADJUST ALIGNMENT	
STEAM TURBINE	MOVING BLADE	INCREASE OF VIBRATION AMPLITUDE		DEPOSIT OF SCALE		PERFORM HONING PROCESS IN PERIODIC INSPECTION	
.	.	.		.		.	
.	.	.		.		.	
.	.	.		.		.	
.	.	.		.		.	